

AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1. (Currently amended) Method for producing modified flours or modified powdery to grainy, especially finely grained, starch-containing products from a ground or comminuted raw material product, predominantly containing starch, ~~such as starch or flours from grains or tubers, especially wheat, rye flour, corn flour, potato flour, tapioca flour, etc. their mixtures and the like,~~ the method comprising the following steps:

- a) mixing and wetting the at least one comminuted, starch-containing raw material product with water and/or water vapor and optionally further additives by moving the raw material product in a mixing chamber (17) of a preconditioner during a first residence time for mixing,
- b) allowing the water and/or the water vapor to act on the at least one raw material product by moving the raw material product in an action chamber (18) of the preconditioner during a first residence time for action,

- c) extruding the mixture of water and raw material product, preconditioned in the mixing chamber and the action chamber in the steps a) and b), the temperature, the pressure, the water content, the mechanical energy introduced and the residence time of the mixture in the extruder (21) being adjusted so that an at least partial plasticization and/or gelatinization of the raw material product to a conveyable mixture, containing a modified starch, takes place and
- d) pelletizing (21a) the conveyable mixture and dry grinding the pellets to a predominantly powdery to grainy intermediate product (1), containing modified starch,

~~characterized in that~~ wherein the powdery to grainy intermediate product (1), obtained by palletizing in step d), is agglomerated (2, 3) by:

- e) mixing and wetting the powdery to grainy intermediate product (1), obtained in step d), with a fluid as well as optionally other additives by moving the intermediate product in a mixing chamber (57) of an agglomerator during a second mixing residence time for mixing, and

f) ~~letting~~ allowing the fluid to act on the powdery to grainy intermediate product (1) by moving the intermediate product in an action chamber (58) of the agglomerator during a second residence time for action, so that agglomerates (2, 3) are formed from the particles (1) of the intermediate, containing the modified starch.

2. (Currently amended) The method of claim 1, ~~characterized in that, on the one hand, wherein~~ the preconditioner, in which steps a) and b) are carried out, ~~and, on the other, the agglomerator, in which steps e) and f) are carried out,~~ each have a mixing chamber above an action chamber, which are connected with one another, each chamber having a rotor shaft, which extends along the respective chamber and is provided all around with tools.

3. (Currently amended) The method of ~~one of the claims 1 to 2,~~ ~~characterized in that~~ claim 1, wherein the preconditioner and the agglomerator have the same construction.

4. (Currently amended) The method of ~~one of the claims 1 to 3,~~ ~~characterized in that~~ claim 1, wherein the residence time of the product in the

mixing chamber during step e) is about 0.2 to 5 seconds ~~and preferably 0.3 to 2 seconds.~~

5. (Currently amended) The method of ~~one of the claims 1 to 4,~~
~~characterized in that~~ claim 1, wherein the residence time of the product in the
action chamber during step f) is about 10 seconds to 15 minutes ~~and preferably 15~~
~~seconds to 60 seconds.~~

6. (Currently amended) The method of ~~one of the claims 1 to 5,~~
~~characterized in that~~ claim 1, wherein the mixing chamber is filled to the extent of
about 1 to 5%.

7. (Currently amended) The method of ~~one of the claims 1 to 6,~~
~~characterized in that~~ claim 1, wherein the action chamber is filled to the extent of
about 25 to 75%.

8. (Currently amended) The method of ~~one of the claims 4 to 7,~~
~~characterized in that~~ claim 4, wherein the pressure in the mixing chamber and the
action chamber is atmospheric pressure and the temperature of the chambers in
each case is between ambient temperature and about 98°C.

9. (Currently amended) The method of ~~one of the claims 1 to 8;~~
~~characterized in that~~ claim 1, wherein a combination of several fluids, which are
contained in the group comprising water, water vapor, sugar solutions and edible
oil, is or will be metered in to wet the powdery to grainy product.

10. (Currently amended) The method of claim 9, ~~characterized in that~~
wherein the fluid or fluids is/are or will be atomized when metered in.

11. (Currently amended) The method of ~~one of the claims 1 to 10~~
~~characterized in that~~ claim 1, wherein the agglomerates, obtained in step f), are
classified according to size.

12. (Currently amended) The method of claim 11, ~~characterized in that~~
wherein the classification takes place in a sifter.

13. (Currently amended) The method of ~~claims 11 or 12,~~ characterized
in that claim 11, wherein the fraction of the agglomerates, which exceed a specified
maximum agglomerate size, initially is supplied to a comminuting device, ~~such as~~
~~an impact mill,~~ and subsequently, ~~optionally together with the product obtained in~~
~~step d),~~ once again is supplied to the agglomerator.

14. (Currently amended) The method of ~~one of the claims 11 to 13,~~
~~characterized in that~~ claim 11, wherein the fraction of the agglomerates, which are
smaller than a specified minimum agglomerate size, ~~optionally together with the~~
~~product obtained in step d),~~ once again is supplied to the agglomerator.

15. (Currently amended) The method of ~~claims 13 or 14,~~ characterized
~~in that~~ claim 13, wherein the fraction of the agglomerates, which are smaller than
the maximum agglomerates size and/or larger than the minimum agglomerates size,
is collected as end product.

16. (Currently amended) The method of ~~one of the claims 1 to 15,~~
~~characterized in that it is~~ claim 1, wherein the during and between a) and f) are
carried out continuously ~~during and between the steps a) to f).~~

17. (Currently amended) The method of ~~one of the claims 1 to 16,~~
~~characterized in that~~ claim 1, wherein further additives, ~~such as flavors, spices,~~
~~coloring materials, emulsifiers, acids and the like,~~ are metered in during at least
one of the steps a) to f).

18. (Currently amended) The method of ~~one of the preceding claims, characterized in that~~ claim 1, wherein the intermediate product in the mixing chamber is moved by means of a shaft, which rotates about its longitudinal axis and has radially protruding conveying elements.

19. (Currently amended) The method of ~~one of the preceding claims, characterized in that~~ claim 1, wherein the intermediate product in the action chamber is moved by means of a shaft, which rotates about its longitudinal axis and has radially protruding conveying elements.

20. (Currently amended) The method of ~~claims 18 or 19, characterized in that~~ claim 18, wherein the shaft of the mixing chamber is driven at a rate of about 50 rpm to 900 rpm ~~and especially of about 700 rpm.~~

21. (Currently amended) The method of ~~one of the claims 18 to 19, characterized in that~~ claim 18, wherein the shaft of the action chamber is driven at a rate of about 5 rpm to 30 rpm.

22. (Currently amended) The method of ~~one of the claims 18 to 21, characterized in that~~ claim 18, wherein the mixing chamber essentially has the

shape of a horizontal cylinder, the axis of rotation of the shaft extending along the axis of the cylinder.

23. (Currently amended) The method of ~~one of the claims 18 to 22,~~
~~characterized in that~~ claim 18, wherein the action chamber essentially is in the
shape of a horizontal cylinder, the axis of rotation of the shaft extending along the
axis of the cylinder.

24. (Currently amended) The method of ~~one of the claims 18 to 23,~~
~~characterized in that~~ claim 18, wherein the capacity of the action chamber is about
1.5 times to 10 times ~~and especially about twice to five times that~~ of the mixing
chamber.

25. (Currently amended) The method of ~~one of the preceding claims,~~
~~characterized in that~~ claim 1, wherein the fluid, used in step e) for wetting the
intermediate product and in step f) for acting on the intermediate product, contains
at least water vapor and/or water.

26. (Currently amended) Installation for producing modified flours or
modified, powdery to grainy, especially finally grained, starch-containing products

from a ground or comminuted raw material product, predominantly containing starch, ~~using the method of one of the claims 1 to 25, the installation having the following parts or machines comprising:~~

- [[>]] a preconditioner ~~(17, 18)~~ with a mixing chamber (17) for mixing and wetting the at least one comminuted, starch-containing raw material product with water and/or water vapor as well as optionally further additives and an action chamber (18) for permitting the water and/or water vapor to act on the at least one raw material product,
- [[>]] an extruder ~~(21)~~ for extruding the preconditioned mixture, containing water and the raw material product and emerging from the mixing chamber (17) and the action chamber (18), the extruder ~~(21)~~ having a pelletizing device ~~(21a)~~ for pelletizing the mixture emerging from the extruder,
- [[>]] a mill ~~(34)~~ for grinding the pellets dry into a powdery to grainy intermediate product, and
- [[>]] an agglomerator ~~(57, 58)~~ for agglomerating the powdery to grainy intermediate product,
- [[>]] ~~characterized in that~~ wherein the agglomerator ~~(57, 58)~~ has comprises:

[[>]] a mixing chamber (57) for mixing and wetting the powdery to grainy intermediate product, obtained in the mill, with a fluid as ~~well as optionally further additives~~, and an action chamber (58) for allowing the fluid to action the powdery to grainy intermediate product.

27. (Currently amended) The installation of claim 26, ~~characterized in that wherein~~ the preconditioner (17, 18) and/or the agglomerator (57, 58) each have a mixing chamber (17, 18) above an action chamber (18, 58), which are connected with one another, each chamber having a rotor shaft, which extends along the respective chamber and is provided with tools around the shaft.

28. (Currently amended) The installation of ~~claims 26 or 27, characterized in that~~ claim 26, wherein the precondition (17, 18) has the same construction as the agglomerator (57, 58).

29. (Currently amended) The installation of ~~one of the claims 26 to 28, characterized in that~~ claim 26, wherein the mixing chamber (17, 57) essentially has the shape of a horizontal cylinder, the axis of rotation of the shaft extending along the axis of the cylinder.

30. (Currently amended) The installation of ~~one of the claims 26 to 29, characterized in that~~ claim 26, wherein the action chamber (18, 58) essentially has the shape of a horizontal cylinder, the axis of rotation of the shaft extending along the axis of the cylinder.

31. (Currently amended) Modified flour, which ~~consists of~~ comprises agglomerates, which are produced from a ground or comminuted, predominantly starch-containing raw material product, ~~such as starch or flour from grain or tubers, especially wheat, rye flour, corn flour, potato flour, tapioca flour, etc. or their mixtures and the like,~~ according to the method of ~~one of the claims 1 to 25~~ claim 1.

32. (Currently amended) The modified flour of claim 31, ~~characterized in that wherein~~ the agglomerates ~~may~~ range in size essentially from about 200 μm to 5 mm ~~and particularly from 500 μm to 2 mm.~~

33. (New) The method of claim 1, wherein said ground or comminuted raw material product, predominantly containing starch includes starch or flours from grains or tubers, selected from the group consisting of wheat, rye flour, corn flour, potato flour, tapioca flour, etc. and their mixtures and the like.

34. (New) The method of claim 4, wherein the residence time of the product in the mixing chamber during step e) is about 0.3 to 2 seconds.

35. (New) The method of claim 5, wherein the residence time of the product in the action chamber during step f) is about 15 seconds to 60 seconds.

36. (New) The method of claim 13, wherein said comminuting device comprises an impact mill.

37. (New) The method of claim 11, wherein the fraction of the agglomerates, which exceed a specified maximum agglomerate size, initially is supplied to a comminuting device, and subsequently, together with the product obtained in step d), once again is supplied to the agglomerator.

38. (New) The method of claim 11, wherein the fraction of the agglomerates, which are smaller than a specified minimum agglomerate size, together with the product obtained in step d), once again is supplied to the agglomerator.

39. (New) The method of claim 17, wherein said further additives are selected from the group consisting of flavors, spices, coloring materials, emulsifiers, acids and the like.

40. (New) The method of claim 20, wherein the mixing chamber is driven at a rate of about 700 rpm.

41. (New) The method of claim 24, wherein the capacity of the action chamber is about twice to five times that of the mixing chamber.

42. (New) Installation for producing modified flours or modified, powdery to grainy, especially finally grained, starch-containing products from a ground or comminuted raw material product, predominantly containing starch, using the method of claim 1, the installation having the following parts or machines:

a preconditioner with a mixing chamber for mixing and wetting the at least one comminuted, starch-containing raw material product with water and/or water vapor as well as optionally further additives and an action chamber for permitting the water and/or water vapor to act on the at least one raw material product,

an extruder for extruding the preconditioned mixture, containing water and the raw material product and emerging from the mixing chamber and the action chamber, the extruder having a pelletizing device for pelletizing the mixture emerging from the extruder,

a mill for grinding the pellets dry into a powdery to grainy intermediate product and

an agglomerator for agglomerating the powdery to grainy intermediate product,

wherein the agglomerator comprises:

a mixing chamber for mixing and wetting the powdery to grainy intermediate product, obtained in the mill, with a fluid, and an action chamber for allowing the fluid to action the powdery to grainy intermediate product.

43. (New) The installation of claim 26, wherein the mixing chamber for mixing and wetting the powdery to grainy intermediate product, obtained in the mill, with a fluid also mixes further additives.

44. (New) The modified flour of claim 31, wherein the starch-containing raw material product includes starch or flour from grain or tubers selected from the group consisting of wheat, rye flour, corn flour, potato flour, tapioca flour, etc. and their mixtures and the like.

45. (New) The modified flour of claim 32, wherein the agglomerates range in size essentially from 500 μm to 2mm.